

A New *Acalypta* (Heteroptera, Tingidae) from Taiwan¹⁾

By

Masaaki TOMOKUNI

Department of Zoology, National Science Museum, Tokyo

Abstract A new muscicolous Tingidae is described from Taiwan under the name *Acalypta formosana*. This is not only the first record of *Acalypta* from Taiwan but marks the southernmost habitat of the genus in East Asia.

During the course of the entomological researches in Taiwan made by the National Science Museum, Tokyo, in 1990, the author collected some specimens of an undescribed species of the genus *Acalypta* at a high altitude of the Nan-hu-ta-shan and Hsueh-shan areas of northern Taiwan. Though several species of the genus are distributed in Northeast Asian regions from Siberia to Japan, none have hitherto been known from Taiwan. It is therefore noticeable that a member of the genus occurs in such a tropical country as Taiwan, since *Acalypta* is evidently cold-temperate element in nature. This species is probably an example of glacial relicts preserved on the high mountains of Taiwan from the Pleistocene.

Before going further, the author wishes to express his hearty thanks to Dr. Yau-i CHU, Mr. Chiun-cheng KO and Mr. Chun-lin LI of National Taiwan University for their kind arrangement of the research, and to Dr. Mamoru OWADA, National Science Museum, Tokyo, Mr. Hsiau-yue WANG, National Taiwan Museum, and Mr. Wern-jyh LIN of Taipei City and his circle for their kind help during the field works in Taiwan. His grateful thanks are also due to Dr. Shun-Ichi UÉNO, National Science Museum, Tokyo, in reading the manuscript of this paper.

Acalypta formosana sp. nov.

(Fig. 1)

Brachypterous male (Holotype). General color yellowish brown. Head excluding appendages fuscous. Antennae brown with 4th segments fuscous. Antenniferous tubercles and frontal spines brown. Eyes reddish brown. Apical segment of rostrum fuscous. Callus dark brown. Small spots irregularly scattered on pronotum and hemelytra dark brown. Each pleuron dark brown. Abdomen beneath fuscous. Legs brown with femora dark brown.

Body ovate. Head with several punctures on vertex. A pair of frontal spines on head very short, ending at a level far from the tip of tylus. Antenna pubescent,

1) This study is supported by the Grant-in-aid No. 01041099 for Field Research of Monbusho International Scientific Research Program, Japan.

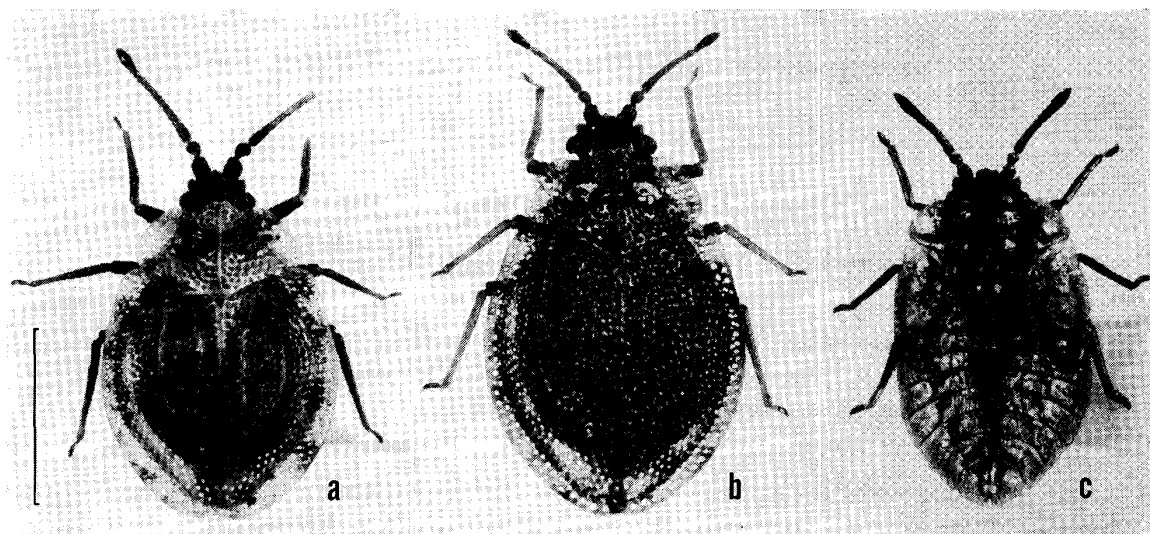


Fig. 1. *Acalypta formosana* sp. nov. — a, Holotype, ♂; b, paratype, ♀; c, paratype, nymph.
Scale: 1.0 mm.

0.9 mm in length; basal segment thickest, about $2/3$ as broad as its length; second short, as broad as long; third tapering apicad, slightly longer than head width across eyes; fourth fusiform, widest a little beyond the middle; relative lengths from 1st to 4th segments as 5: 3: 17: 8. Antenniferous tubercle short and obtuse. Eye botryoidal, prominent laterally, hence ellipsoidal in dorsal view. Jugum deeply and coarsely punctate. Buccula widely open in front, about $1/3$ as high as long, irregularly triseriate at the widest part. Rostrum as long as antenna, extending beyond hind border of the first visible abdominal sternite; relative lengths of segments 1 to 4 as 10: 9: 7: 10.

Pronotum unicarinate, much wider than long (8: 5). Hood low; anterior margin weakly and obtusely produced forward only concealing basal part of vertex. Median carina low but distinct, concavely sinuate at callus in profile, with a series of extremely minute areoletts along the whole length, of which only one at the level of calli is conspicuously large. Callus weakly depressed, with a faint median transverse furrow. Paranotum triseriate, about $1/3$ as wide as long; anterolateral corner obtuse, feebly protruded forward; outer margin gently curved outward; posterolateral angle rounded. Poseterior process short, less than $1/4$ of its basal width (7: 31).

Hemelytron finely reticulate, a little narrower than half the length (9: 20); costal area moderately wide, obliquely reflexed upward, biseriate in middle, triseriate in anterior and posterior portions, with areolae as large as or slightly larger than those of the other areas; subcostal area distinctly wider than twice the width of costal area at the middle of hemelytron, with 7 irregular rows of cells in the widest part; discoidal area short and narrow, expanding a little beyond the middle of hemelytron (19: 30), quadriseriate; sutural area clearly defined from discoidal and subcostal ones, biseriate in middle, triseriate in the widest part behind middle; boundary veins strongly carinate except for anterior $1/3$ of discoidal-sutural boundary vein which gradually

becomes obscure forward; hypocostal lamina moderately high, a little higher than half the width of costal area at middle, irregularly biseriate basad, thence posteriorly uniseriate.

Each pleuron coarsely and evenly punctate. Sternal laminae apparently lower than buccula, open both in front and behind; mesosternal one lower than the posterior. Legs relatively thick; fore and middle femora thickest at middle; hind femur thickest at 1/3 from the tip. Body length with hemelytra 2.0 mm; width across hemelytra 1.3 mm; pronotal width across paranota 0.9 mm.

Brachypterous female (2 paratypes). General appearance very similar to the holotype except for the following characters. General color much darker, dark reddish brown. Antenna relatively short, about 0.8 mm in length. Costal area of hemelytron narrower, mostly biseriate, triseriate only near the base. Body length with hemelytra 2.3 mm, width across hemelytra 1.4–1.5 mm; pronotal width across paranota 1.0 mm.

Type series. Holotype: ♂, Wu-ling, ca. 2,100 m alt. along the mountain-path from Wu-ling to Chi-chia Shan-chuang on Mt. Hsueh-shan, Tai-chung Hsien, Taiwan, 13–VIII–1990, M. TOMOKUNI leg. Paratypes: 2 ♀, 1 nymph (5th instar), Mt. Tao-sai-feng, ca. 3,400 m alt., Mts. Nan-hu-ta-shan, Hua-lien Hsien, Taiwan, 8–VIII–1990, M. TOMOKUNI leg. Additional specimens examined: 2 nymphs (4th and 5th instars), at ca. 3,300 m alt. beside the path along the Ho-ping-nan-chi Valley, SE of Mt. Nan-hu-ta-shan, Hua-lien Hsien, Taiwan, 8–VIII–1990, M. TOMOKUNI leg. These nymphs probably referable to this species are not included in the type series, since no adult has been obtained from the same locality.

The holotype and paratypes are preserved in the National Science Museum (Nat. Hist.), Tokyo.

Remarks. The present new species seems to belong to the *sauteri*-group of the East Asian *Acalypta* with the other Japanese species, *hirashimai*, *miyamotoi* and *tsurugisana*, in view of its morphological peculiarities, particularly of its unicarinate pronotum. However, this is easily distinguished from the others by having very short cephalic spines, small areolae on paranota and costal areas of hemelytra, short and narrow discoidal areas, and strongly carinated boundary veins, especially those between discoidal and sutural areas. Although all the specimens recorded here were collected by patting undetermined bryopsids growing on rocks along mountain-paths, which seem to be the host plants of the lace bug, any other information of the biology of this species has not yet been known.

References

- PÉRICART, J., 1978. Révision systématique des Tingidae ouest-paléarctiques. 5. Contribution à la connaissance du genre *Acalypta* WESTWOOD (Hemiptera). *Annls Soc. ent. Fr.*, (N. S.), 14: 683–701.
- TOMOKUNI, M., 1972. Japanese species of the genus *Acalypta* (Hemiptera: Tingidae). *Trans. Shikoku ent. Soc.*, 11: 87–91.
- 1983. Notes on the Japanese species of *Acalypta* (Hemiptera, Tingidae). *Mem. natn. Sci. Mus., Tokyo*, (16): 145–154. (In Japanese with English summary.)